



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,335	12/30/2003	Suzanne Walker Kahne	4555-121 US	8137
<div>7590      02/08/2007 Patrick H. Higgins Mathews, Collins, Shepherd &amp; McKay Suite 306 100 Thanet Circle Princeton, NJ 08540</div>			<div>EXAMINER MARTIN, PAUL C</div> <div>ART UNIT      PAPER NUMBER 1657</div>	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/08/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/748,335	Applicant(s) KAHNE ET AL.	
	Examiner Paul C. Martin	Art Unit 1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-23 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1-11 and 21-23 are pending in this application and were examined on their merits.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Response to Amendment***

The Declaration under 37 CFR 1.132 filed 08/21/06 is sufficient to overcome the rejection of Claims 1-11 and 21-23 under 35 U.S.C. 103(a) as being unpatentable over Kahne *et al.* (US 2002/018266 A1) in view of Helm *et al.* (2003).

The Declaration under 37 CFR 1.132 filed 08/21/06 is insufficient to overcome the rejection of claims 1-8 under 35 U.S.C. 102(b) as being anticipated by Kahne *et al.* (US 2002/018266 A1) as set forth in the last Office action because: A Declaration cannot overcome a rejection based a reference applied under 35 U.S.C. 102(b) which represents a statutory bar.

***Claim Objections***

Claim 8 is newly objected to because of the following informalities: The use of parenthesis in the claim is improper. Appropriate correction is required.

Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

The rejection of Claims 21 and 23 under 35 U.S.C. 102(b) as being anticipated by Kahne *et al.* (US 2002/018266 A1) has been withdrawn as the Applicant's arguments regarding the difference between a donor displacement and kinetic assay were found to be persuasive.

Claims 1-8 remain rejected under 35 U.S.C. 102(b) as being anticipated by Kahne *et al.* (US 2002/018266 A1) for reasons of record set forth in the Action mailed 05/18/06, repeated below:

Kahne *et al.* teaches a method for identifying compounds with the ability to inhibit GlcNAc Transferase activity, wherein MurG, C<sup>14</sup> labeled UDP-GlcNAc, and a substrate analog are combined under conditions suitable for the binding and catalysis of MurG to the labeled UDP-GlcNAc, and measuring the amount of the formed coupling product is then monitored over time as a control, a potential inhibitory compound is added to the mixture and the decrease in production of labeled coupling product is monitored and compared to the control (Pg. 6, Columns 1&2 , Paragraphs [0048], [0049] and Pg. 20, Claim 36).

Kahne *et al.* teaches wherein the substrate can have covalently attached labeling groups such as radiolabel, fluorescent, affinity, hydrophobic and hydrophilic (Pg. 5, Paragraphs [0041] and [0042]).

It is inherent in the method that a compound that would prevent catalysis of an enzyme with a substrate would do so by preventing binding by the enzyme to the substrate, as it is well known in the art that any reaction between enzyme and substrate is predicated on a binding step.

### ***Response to Arguments***

Applicant's arguments filed 08/21/06 have been fully considered but they are not persuasive.

The Applicant argues that the Examiner admits that "Kahne does not teach performing a donor displacement assay..." which should be enough to remove Kahne as an anticipatory reference (Remarks, Pg. 5, Lines 7-9).

The Applicant argues that the instant invention is a donor displacement assay whereas the assay of Kahne *et al.* is a kinetic assay (Remarks, Pg. 5, Lines 5-14).

The Applicants arguments are not found to be persuasive for the following reasons, Applicant conveniently forgot to include the portion of the sentence following the quote from the Office Action above. The full sentence reads as follows: "Kahne does not teach performing a donor displacement assay *based on the displacement of a fluorescently labeled glycosyl donor.*" As can be seen from the full sentence, it is qualified to read that the Kahne *et al.* reference does not anticipate the instantly claimed invention **only** by the presence of a fluorescently labeled glycosyl donor.

The Applicant's arguments that the instant invention is a donor displacement assay whereas the assay of Kahne *et al.* is a kinetic assay is not found to be persuasive because there is nothing to indicate in Claim 1 that a donor displacement assay is being performed vs. a kinetic assay. To reiterate as stated above, a compound that would prevent catalysis of an enzyme with a substrate would do so by preventing binding by the enzyme to the substrate, as it is well known in the art that any reaction between enzyme and substrate is predicated on a binding step.

The kinetic activity assay of Kahne *et al.* represents an indirect means of measuring substrate binding, and as such anticipates the instantly claimed invention.

***Claim Rejections - 35 USC § 103***

The rejection of Claims 1-11 and 21-23 under 35 U.S.C. 103(a) as being unpatentable over Kahne *et al.* (US 2002/018266 A1) in view of Helm *et al.* (2003) has been withdrawn due to the Applicant's Declaration filed 08/21/06.

Claims 1-10 are newly rejected under 35 U.S.C. 103(a) as being unpatentable over Kahne *et al.* (US 2002/018266 A1) in view of MacLeod *et al.* (US 6,221,600 B1).

The teachings of Kahne *et al.* were discussed above.

Kahne *et al.* does not teach wherein the labeled substrate is the fluorophore fluorescein.

MacLeod *et al.* teaches the use of the covalently attached fluorescent fluorophore fluorescein as a labeling group (Column 6, Lines 38-48).

Art Unit: 1657

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize a labeled substrate wherein the label is the fluorophore fluorescein because Kahne *et al.* teaches that the substrate can be labeled with fluorescent groups and MacLeod *et al.* teaches that the fluorescent fluorophore fluorescein as known in the art as a labeling group. The use of alternatives and functional equivalent techniques would have been desirable to those of ordinary skill in the art based upon the economics and availability of compounds, i.e., the use of fluorescein as the fluorescent group labeling the substrate. There would have been a reasonable expectation of success in making this modification because fluorescein is an art recognized fluorescent group commonly used as a label.

### ***Conclusion***

Claims 1-10 are rejected, Claims 11 and 21-23 are free of the art, Claims 21-23 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul C. Martin whose telephone number is 571-272-3348. The examiner can normally be reached on M-F 8am-4:30pm.



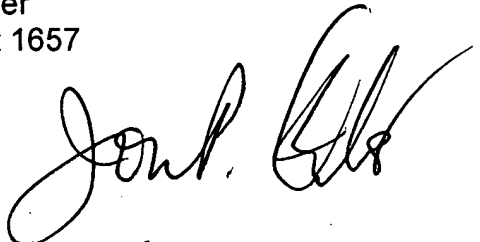
Art Unit: 1657

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Martin  
Examiner  
Art Unit 1657

01/26/07



**Jon Weber**  
**Supervisory Patent Examiner**